



MAGAZINE



Volume 40 Number 307

Contents

- 219 The Editor takes Aim
- 220 Our Life in Canada, by Peter Allen
- 226 What is all this about Two Cultures? by John Wren Lewis
- 230 One Man and his Job—Control Laboratory Assistant
- 232 People and Events
- 238 All at Stake Down Under, by Denzil Batchelor
- 242 Putting Pieces in the Papers, by Geoffrey Richards
- 244 Whom the Gods Love, by James Taylor
- 246 August and September in the Garden, by Percy Thrower
- 248 Switzerland—a Minor Miracle, by Jeffrey Jackson

Contributors

Peter Allen, author of our lead story on Canada, is now overseas director responsible for Western Europe, a job he took over earlier this year after three years in Canada as president of CIL. He has been a director of ICI since 1951. Has many interests outside work, of which the chief are perhaps golf, travel and railways.

Jeffrey Jackson has been working for the World Health Organisation in Geneva since June last year. Before that he was employed at Head Office, first in the Technical Department and later in the engineering research publications section of Chemical Engineering Services Department. Holds a first class honours degree in chemistry of London University and has a working knowledge of ten languages. Met his wife, also ex-London University, while they were both working at Millbank.

John Wren Lewis is a member of Head Office Research and Development Department. On graduating in mathematics from Imperial College, London, in 1944, he joined a research team associated with ICI doing special wartime research and has been with the Company ever since. A rare combination of scientist and theologian, has become well known as a writer and broadcaster. In 1960 was Distinguished Visiting Lecturer in Education to the University of Leeds and this year was the first layman to deliver the Stephenson Lectures at Sheffield University.

Geoffrey Richards, an ex-journalist, is ICI's press officer. His article covers just one aspect of the Company's relations with the Press—the writing and distribution of a formal press release. When not dealing with such matters, is an enthusiastic repairer and driver of elderly vehicles and a deviser of complex electrical communications contrivances.

James Taylor has been a regular contributor to the *Magazine* over the past years. Originally a physicist in the Nobel Division, he is now the ICI director responsible for Metal interests and is chairman of Yorkshire Imperial Metals Ltd., Imperial Aluminium Co. Ltd., Associated Light Metal Industries Ltd. and the newly formed Imperial Metal Industries Ltd.

Cover

The maple leaf, emblem of Canada, symbolizes the feature article by Peter Allen

The ICI Magazine, price fourpence, is published every other month. It is printed at The Kynoch Press, Birmingham, and published by Imperial Chemical Industries Limited, Imperial Chemical House, Millbank, London S.W.1 (phone VICtoria 4444). The editor is glad to consider articles and photographs for publication, and payment will be made for those accepted.



Peter Allen



John Wren Lewis



Geoffrey Richards



James Taylor

THE EDITOR TAKES AIM



SUBSCRIBERS to the *Magazine* should be by now familiar with the considerations which have led to its appearance every second month, and to the price per copy being fixed at fourpence instead of twopence. Readers whose memories go back to the period when the *Magazine* was restarted after the wartime closure of all house journals will recall that from 1947 to 1950 it also appeared at two-monthly intervals. I was then its editor too. It is to be hoped that no more than coincidence is involved.

Editing a house journal for a company such as ICI is not altogether the easy task it might appear. As Sir Richard Keane, in whose able charge the *Magazine* has earned for itself such outstanding goodwill both within the Company and also outside, has himself expressed it: "The *Magazine* must write up the Company's activities in terms which will satisfy both the appetite of the rank and file of readers and the susceptibilities of the men doing the particular job being publicised. These two requirements are by no means always in harmony. Indeed, more often than not there is a conflict; and it sometimes needs considerable editorial skill and tactful negotiation before a compromise is reached."

Speaking for myself, no change in editorial policy is contemplated and every effort will be made to maintain the very high standards set by the last editor, which have been the foundation of the *Magazine's* success. Certain changes in emphasis and selection will undoubtedly be necessary, resultant from the change to bi-monthly publication, but the objectives and principles of the *Magazine* remain unaffected. These are to reflect the Company's progress and policies, to serve as a connecting link between the members of the ICI family, and also, as I sincerely hope, to afford a genial forum for the display and exercise of the variegated talents of individual members of our Company.

HENRY MAXWELL

Our life in Canada

 by Peter Allen

For an ICI main board director to serve as president of one of the Company's principal overseas subsidiaries must be a very rare, if not unique, event. We asked Mr. Allen to put on paper some of his outstanding impressions of his experience.

THE change of note of the big Britannia's engines woke us from our sleep, but outside it was still black winter night. Then far below a few lights appeared and then, with dramatic suddenness, the million lights of a big city, with the huge Cross on Mount Royal, picked out in lights, conspicuous over all.

In a few minutes we had landed, at 4.30 a.m. on the first of January, and the great adventure had begun. The snow creaked under our shoes as we walked from the aircraft; it seemed appallingly cold.

My assignment as President of Canadian Industries Ltd. was for a three to four year period and in fact lasted 38 months. My first duty was to get to know the company I had joined, and it was soon apparent that seeing the whole of Canadian Industries Ltd. was to be quite a task in itself, for, although about 60% of the population of Canada lives in the area between Quebec City and Windsor, Ontario, a distance of about 650 miles, and most of the Company's plants and offices are in this area, the total spread of CIL is from St. John's, Newfoundland, to Victoria, British Columbia, a distance near 3500 miles.

All over Canada, CIL, which incidentally is celebrating its centenary this year, is deployed in 132 departments and establishments, many of them grouped together, of course, but in no less than 38 different locations. I set out to visit all of these within the first year but it was not until December as I walked into CIL's oldest office, in Nelson, B.C., an isolated spot



CIL House, Montreal



Pipework at CIL's Paint Plant at York Works, Toronto



McMasterville, Quebec, in wintry conditions. The new Explosives Process Laboratory is on the right

amid tremendous mountains, that I was able to say, "Well, I've done it"—and had shaken perhaps two thousand hands in the process.

We were lucky in that the introduction of jet flying fitted our time in Canada so well, for these new machines have greatly reduced the wear and tear of travel. On almost our last flight in Canada, when we were returning from a farewell trip to the West, we flew from Winnipeg to Toronto, 950 miles, in 100 minutes. On this flight, too, we saw the corresponding flight heading west, about half a mile off; it seemed to tear past at a quite fantastic speed.

Our time in Canada was one of economic uncertainty, when the big boom of the fifties seemed somehow to have run out of steam, and questions were being asked about Canada's future; anxieties were felt at the penetration of American ownership of natural resources and industry, and at the inability of the country's economy to give full employment. Many of these problems, it seems to me, are those of a country growing or trying to grow rather too fast, though the problem of unemployment has been a painful and persistent one. Canada has immense natural resources in her forest lands and the wheat lands of the Prairies, and in her ores and mineral deposits—though some of these are in singularly inhospitable places—and now, since the War, in oil and natural gas. It is inconceivable, therefore, in spite of a hard climate and much barren land in the area known to geologists as the Precambrian Shield, that Canada has not an excellent long-term future; she has so much that the world finds essential.

Short term, the future is much more complex. The great neighbour to the south is an almost irresistible force imposing its standards of demand and supply on a country far from willing to resist. To maintain Canadian economic and political independence is a task which may prove insuperably difficult in the next twenty-five years, for this independence can only be kept at a price. One thing is sure, and that is that the Province of Quebec with its French background and language will be among the most resistant to any integration with the United States.

The penetration by the United States of Canadian industry and resources—a process which is just gathering momentum here in Britain also—has been considerable, and now approximately half Canadian industry is American-owned, with the percentages much higher in certain areas such as the oil industry. This has been in many ways an exceedingly valuable thing for Canada, for without this American capital many Canadian resources would have either been undeveloped from lack of money or developed by others, less understanding and undemanding than the Americans have generally been. Nevertheless, many Canadians are understandably worried about how far the U.S. has infiltrated into the Canadian economy and to the persistent unfavourable balance of trade between the countries.

One of the most spectacular developments in Canadian industry has been the opening up, largely with American money, of the iron-ore deposits in the wild wastes of northern Quebec and Labrador. Here, miles from any previous habitation, whole new towns have been developed, and over 500 miles of railway laid to bring the ore down to the north coast of the St. Lawrence estuary near Sept Îles for shipment by ocean-going

The prairies of Saskatchewan. Grain elevators in the foreground



Winter construction on the Trans-Canada Highway above the shore of Lake Superior

ship or by laker up the St. Lawrence Seaway to the steel furnaces of America. The ore trains on the Quebec North Shore and Labrador Railway—125 sixty-ton cars behind quadruple diesels—are an impressive sight, each car with its analysis teleprinted ahead so that the train can be marshalled according to ore composition at the dockside before the ships are loaded, and all the complex train movements controlled by an ex-member of the ICI sales office in Birmingham! Just along the coast at Port Cartier, where an entire harbour was blasted out of solid rock, another railway into the hinterland has just been completed, with the aid of CIL explosives. I visited this line during construction in 1960 and, apart from the mosquitoes, which with the black-flies make life rather difficult in the bush in summer, it was a memorable experience in splendid wild country. Here a bear or a moose can come out of the forest quite often and you have to keep a special lookout after dark. Hitting a moose with your car is disastrous for the car.

Yes, great construction feats are still commonplace in Canada.

The 450 million dollar St. Lawrence Seaway, built jointly with the USA, was opened by the Queen and President Eisenhower while we were in Canada, and the last stretch of the Trans-Canada Highway along the fierce rocky shores of Lake Superior was completed in 1960. Then in more domestic zones, Montreal has grown a whole crop of new skyscrapers, including the great glass tower of CIL House, in the last three years.

The business of CIL, like that of ICI, tends to go closely with that of the nation. During the three years that I was there, we saw, in 1959 and early 1960, a recovery from the mild recession of 1958. Then a further mild recession set in, which lasted until the autumn of 1961, after which a slow but steady recovery occurred which is still continuing. All this was reflected in CIL's trade, but over and above that there has been one very important technological change which has had a serious effect on our affairs there. This has been the replacement of the conventional explosives of the dynamite type for all forms of mining and quarrying by mixtures of ammonium nitrate and



Brownsburg Ammunition factory, in Quebec Province, in midwinter

fuel oil, as it were "activated fertilizers." This change, which started in the late '50s, has been gathering momentum and is as important and as disrupting as the similar change-over from gunpowder to dynamite sixty or seventy years ago. This is change and progress which cannot be gainsaid, but, as dynamite was the principal profitmaker of CIL, it has given us a rough time profitwise. It is as well that our other staples like heavy chemicals, paints and ammunition have managed to hold the fort and that our new ventures like polythene and 'Terylene' are now progressing well in the Canadian market. I was particularly pleased that just at the end of my term it was found economic to develop an entirely new site at Dalhousie, New Brunswick, for the third CIL chlorine-caustic soda plant.

How did my wife and I react to Canada and the Canadians, and they to us? Very well, I like to think, for we made many close friends and found a readiness everywhere to meet us halfway, to talk freely and be willing to hear and express opinions. Canada is often refreshingly unstuffy, a spade is usually called a

spade and, although I used to grumble about some of the "sacred cows" of organisation now and again, I was always pleased when the local foreman looked you in the eye and called you by your first name. A young nephew of mine spent a couple of months with us in 1960 and for part of the time he worked as a labourer in a CIL warehouse and thoroughly enjoyed the experience. I must say though that we found the climate rather tough. Montreal with about 10 feet of snow each winter and a temperature range of 110°F is a little trying, and on my first morning walking to work I got my ears frozen. You quickly learn the need for ear muffs, and a fur hat is a comfort; for sometimes the temperature never rises above zero for days on end.

Canada and CIL did much for my wife and myself, giving me the joys of an independent command and a long look at the New World and New World ways of doing things. When the time came to say the goodbyes it was a sad and sentimental moment for us both.

What is all this about the two cultures?

by John Wren-Lewis

THERE'S nothing like giving a name to something, for helping people to get a grip on it. This was the real achievement of Sir Charles Snow—best known to the general public as the novelist C. P. Snow, although he is also a scientist and an industrialist—when he delivered a lecture at Cambridge in 1959 under the title "The Two Cultures and the Scientific Revolution."*



Long before this, people had been aware of the fact that there is often a failure of communication between those whose training lies primarily in science and technology and those whose education has been mainly concerned with arts or humanities. In educational circles, conferences and discussions about it have been going on ever since the war, and when Lord Lindsay of Birker founded the University College of North Staffordshire in 1949 (it became the University of Keele this year, with Princess Margaret as its Chancellor), one of his main objects was to provide a really general education as the foundation for every specialised degree. More recently, with the setting up of the Colleges of Advanced Technology, steps have been taken to provide general courses which will do something to prevent future technologists from being entirely ignorant of languages, humanities or current affairs, while on the other hand the number of books and journals that set out to provide popular science for non-scientists grows every month. But until Sir Charles delivered his Rede lecture, no one had succeeded in giving the problem a name, and this alone would have been a valuable thing to do.

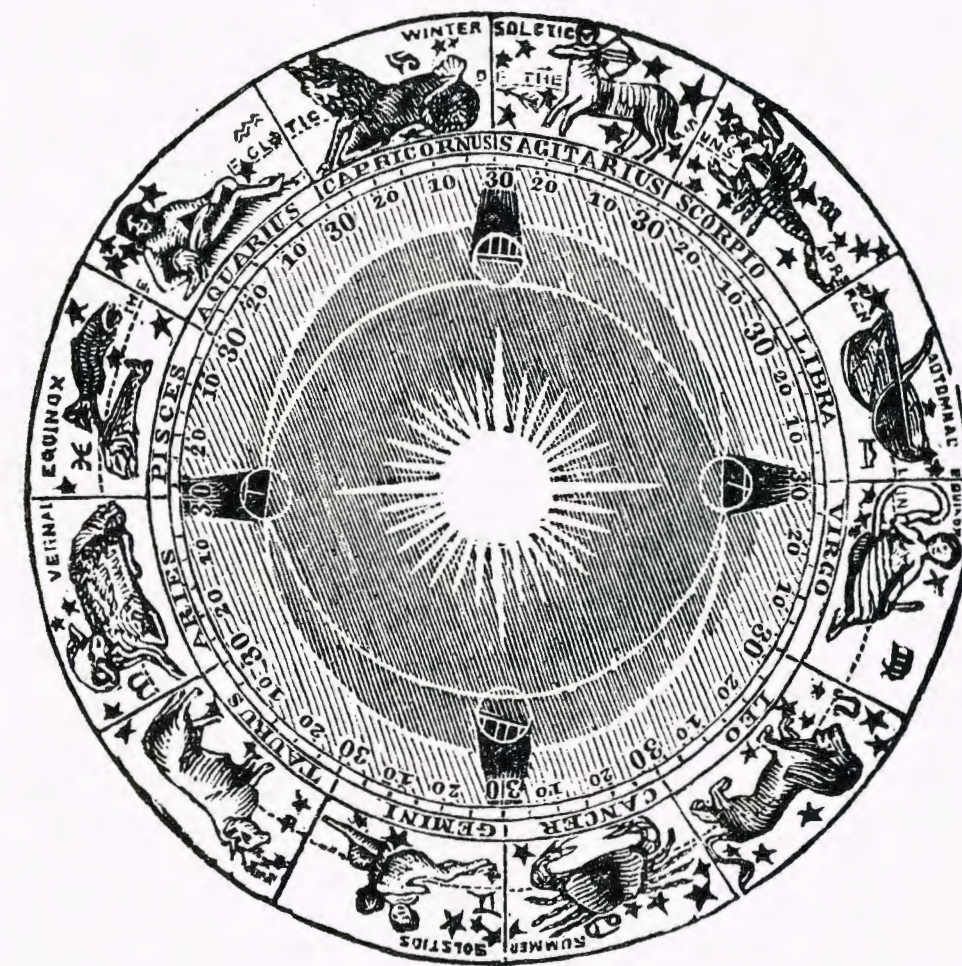
The purpose of the lecture was, of course, more than this. It sought to argue that the gap between "sciences" and "humanities" is the result of something more than mere academic specialisation. Sir Charles put forward the thesis that the past three or four centuries, which have seen such a phenomenal growth of science and technology in Europe, have in

*Published by the Cambridge University Press, price 3s. 6d. net.

effect produced a whole new way of looking at the world, which is something more than a new set of discoveries about particular things like astronomy or physics or chemistry or biology. Scientists and technologists, and people associated with them, tend to respond differently to life's problems, and to be interested in different things, from people whose general interests and education still derive from the traditional bits of European culture—so much so, Snow contended, that it is as if an entirely new culture has arisen in the midst of the old. The word "culture" is used here in the way the anthropologist uses it, meaning not just art or refined behaviour, but a whole way of living. For example, an anthropologist might speak of "the culture of the aborigines," meaning the way they plan their work, organise their family life and entertain themselves, as well as the music or art they produce. The trouble is, Snow argued, that European countries (and Britain in particular) still tend to appoint the senior people in government, law, universities, the Church and even (in many cases) industry, from those whose training has been in terms of the traditional culture, and this is likely to hamper us gravely in the future, since such people are not really fitted for coping with the problems of a technological world.



Of course, the lecture provoked a good deal of disagreement. Many people suggested, for example, that the habits of mind acquired by scientists and technologists are all very well for "getting things done," but are not much use for considering what should be done for the overall good of humanity. It was argued that while there might be a case for having (to quote Lord Fleck on a famous occasion) scientists "on top" and not just "on tap" in industry, the country as a whole needs to be governed primarily by men with a basic humanitarian culture, who at best can only be expected to have a very general knowledge of science. But in spite of such disagreements, Snow's term "the two cultures" proved so useful to everyone embarking on any sort of discussion in this field, that for the past two years it



Astrology, today considered mostly as a joke, was a respectable part of science in most ancient civilisations. It was based on the idea that the movements of the stars, mapped on a horoscope, as illustrated here, could give insight into the hidden forces which also influenced human life. It was a typical non-experimental science; if a reading worked out, it was regarded as a verification; but if it failed, it was simply held to be true in some "deeper" form which could not be immediately observed

has been practically impossible to open one of any of our leading weeklies without finding some reference to the phrase.

Recently the subject has received a lot of new publicity as the result of a brilliant critical attack on Snow's position made in another lecture by a famous Cambridge man—the Richmond lecture, delivered for the undergraduates at Downing College earlier this year by one of our



most important literary critics, Dr. F. R. Leavis. Dr. Leavis has been teaching at Downing for thirty years now, and has

become known to generations of English scholars there as "the Doctor." Although he has never been well known to the public many young men went to Cambridge just



to sit at his feet, and his influence on literary criticism has been such that some people divide up our younger critics into "Leavisites" and "non-Leavisites." This year he retires, and his lecture attracted rather more attention than usual because it was to be something of a valediction. Even greater interest was raised, however, when people learned that it had been an

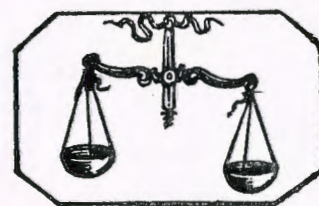
attack, delivered with all the elegant but biting sarcasm which has sometimes characterised scholarly exchanges in our older universities, on Snow and his whole "two cultures" thesis.

Dr. Leavis's main contention was that in so far as there is a new culture associated with the rise of science and technology, it is utterly cheap, shoddy and indifferent to real human values—and he went on to embellish this idea by suggesting that the wide popular acceptance of Snow's writing is itself a sign of how shoddy we have become, since it is utterly second rate, doing no real justice even to the intellectual virtues of the true scientist, still less to art. This of course was good strong stuff, calculated to appeal to people's love of a good fight, and when the lecture was eventually published in the *Spectator*, that newspaper was sold out within twenty-four hours. True, Snow declined to be drawn into the fight; he says it was pure coincidence that he chose, when installed just afterwards as Rector of the University of St. Andrews, to deliver an inaugural lecture on the virtue of magnanimity, in which he stated that British society showed dangerous signs of losing this virtue! But needless to say there were plenty of other people ready to rush in and fight for him, just as there were plenty who welcomed Leavis's lecture as a long-overdue pricking of an unnecessarily inflated Snow-bubble.



Now that the tumult and the shouting have died a little, can we make any sort of assessment of where the truth lies? Let me confess to a certain personal bias in this matter—I belong to that group of younger scientists who are sometimes referred to as "abominable Snowmen" because they owe much of their careers to the work which Snow did during the war years when he was put in charge of directing scientific personnel—and since I've been very happy in my work I feel a certain debt towards him. Nevertheless I don't think I'm being influenced by personal sentiment in saying that I believe his discernment of the idea of two cultures is a piece of real prophetic insight of the first

magnitude. Indeed, perhaps I can acquit myself of any suspicion of personal sentiment by saying that I believe the problem of the two cultures is bigger than Snow himself realises or has been able to express in any of his writings.



What *was* it that made science and technology take such a bound forward during the past three or four hundred years? For thousands of years there have been clever men in the world, just as clever as any of the pioneers of modern science, and just as capable of scientific investigation and of mathematics, yet for all these thousands of years men's knowledge of how the world worked made less progress than it has during the past century alone. Historians are now coming to realise that this could only be because the thinkers and students of nature in these earlier generations were *simply not interested* in the sort of thing we call science today. To be precise, they were not interested in the attitude to the world which makes experiment possible.

What is experiment? At first sight it seems very simple—testing your theories to see if they work in practice—and when we read in the histories of science about the story of Galileo, and his critics who refused to look through his telescope at the evidence which would disprove the traditional theories of what the heavens were like, we tend to think they were guilty of wicked refusal to face the facts. Actually, however, it is all much more complicated than that. The use of the experimental method implies that you believe experience to be the essence of human knowledge, and if you are prepared to allow an experiment to *disprove* your theories, this must mean that you regard experience (i.e. *practical action* of some sort) as more important than your ideas. But this is just what human beings in most civilisations prior to our own have *not* believed. The universal feeling of mankind about the world, prior to the coming of the "new culture" associated with science and technology, was that experience could be unreliable, and one studied it only in order to penetrate

behind it to deeper, more certain realities in some hidden world beyond. This of course was why, in the ancient world, scientific investigation got so muddled up with religious ideas, and Galileo's detractors were, by their own lights, absolutely right to refuse to be swayed by anything he could show them through the telescope. For them it was arrogant to the point of absurdity for him to suggest that a few spots of light seen in a piece of glass could possibly bring into disrepute a view of the universe which had behind it all the authority of traditional teaching, and was firmly linked with current ideas about religion and the moral order of life.

Now Snow is right—righter, I think, even than he realised himself—in holding that the majority of human institutions and social patterns still derive from this traditional outlook. The leaders of society still tend, for example, to expect people to defer automatically to the authority of certain general principles of behaviour which are assumed to be inherently "correct," in the sense of being rooted in some deeper reality, independent of the way things actually work out in practical experience. A great many of our troubles in modern society spring from the fact that the revolutionary outlook for which Galileo stood has now begun to



spread among most people—not only scientists, by any means—throughout the world, with the result that there is increasing unwillingness to accept any such authority. People expect social authority of any kind, from the family right up to the Church and the law of the land, to be justified in terms of practical results, i.e. in terms of good effects that can actually be experienced. And this is a real division in our society today—the division between the traditional outlook, which insists on subordinating experience to principles that are supposed to derive from hidden, deeper realities beyond, and the *empirical* outlook characteristic of (but not confined to) science and technology, which takes human experience itself as the only possible standard of reference.

This is certainly something much more

profound than any mere failure of communication between the "humanities" and the "sciences" in universities, which might be remedied by a little educational compromise. It is much more like a disease of "split personality" affecting civilisation as a whole, and to some extent every one of us is afflicted by it, for we all share each of the two attitudes I have described, yet they are not merely different, they are incompatible. This has been recognised by quite a number of our more perceptive social thinkers, particularly in the literary field, and there are a lot of people today who urge, even more strongly than Dr. Leavis, that the new culture of scientific civilisation represents such a departure from the great traditions of the human race that it will destroy everything that makes life worth living, unless we can somehow recover, in terms of the modern outlook, something of the traditional attitude to experience. People who take this view often link it with some sort of appeal to "reconcile" science with religion; they say our scientific civilisation needs to "recover the sense of the supernatural." In my judgment, however, this is a completely mistaken view of the situation.

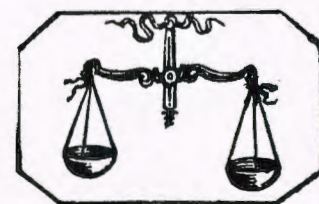


My contention, as a scientist who wants to do full justice both to traditional artistic values and to religion, is that the experimental outlook represents one of the greatest triumphs of mankind. I believe the conscious recognition of the experimental outlook enables the artist and the religious man to find their vocation in the world much more truly than they ever did in terms of the classical outlook, in very much the same way as the scientist has done. In the traditional outlook, all three—scientist, artist and religious man—were reduced to being interpreters of the supposed hidden things beyond experience, i.e. their role was essentially passive, and their activities were all muddled up with one another. With the experimental outlook, however, the artist can assume the much more vital role of being the person who shows forth new creative possibilities *in human experience itself*, whether sensuous, emo-

tional or social; the scientist has the important practical task of providing know-how by which we can change the world so that these richer possibilities in experience are realised by everyone; and the religious man shows people the vision of the final good of human life, in the experience of love, which is just as much an experience as the experience of material things. (In my own personal belief a complete acceptance of the Christian faith is entirely compatible with this emphasis on experience.)



The traditional outlook has been, I believe, correctly diagnosed by psychoanalysis as *inhibited*, in the sense that it fails to do justice to man's creative capacities; by diverting his attention away from experience to supposedly "deeper" things beyond, it prevents him tackling experience fully. This is seen particularly clearly, perhaps, in industry. Modern scientific industry is not just a new *form* of employment—it is a new *kind* of employment. The traditional human outlook involved deep-rooted fear of "interfering" with the general order of nature, precisely because the natural order was thought of as a mere veil for hidden, more "sacred" things beyond. Human labour, therefore, was a sort of sacred ritual for cultivating nature and enabling people to fit themselves into the rhythms and patterns of the natural world; this inevitably meant that for most people life was no more than a continuous round of toil, which they were expected to accept as a sacred duty. Modern industry is possible only because we have come to take a more fully creative attitude to the world, changing the order of nature for the deliberate enrichment of human life. Critics of scientific culture are apt to talk about industry as an ugly defilement of human dignity, but few of them would be willing to accept the conditions of life which *ordinary* people had before the rise of modern science—and it is worth pointing out here that the complaint that industry imposes narrow utilitarian demands on people's education is the sheerest libel. Industry *does not*



want the very narrow technologist, with no interest in anything outside his specialised field: such a man is a *bad technologist*, as well as a bad person to work with others: creativity in technology comes, time and time again, from awareness of the world outside your specialism, often, indeed, outside technology altogether. If our schools and universities produce narrow technologists, with no time to learn anything but technology, this is not because science or industry demand it: it is because our methods of teaching *are still far too dominated by the assumptions of the classical outlook*. Learning is still seen as the mastery of a system of ideas, so that with inherently progressive subjects like the sciences the syllabus inevitably becomes overcrowded, and we are forced towards narrow specialisation. Here, as elsewhere, the way forward towards fuller humanity lies not in recovering the classical outlook but in breaking free from it, so that teaching concentrates on techniques, and lets people find facts for themselves when they need them.

I conclude, therefore, that Snow is absolutely right when he says that where the classical outlook still persists in modern society, and in each of us, it is an obstacle to progress—not to technical progress alone, but to *human* progress. The practical achievements of science and technology in improving the material conditions of human life have been possible only because people have been willing to tackle experience fully, as the classical outlook prevents them from doing, and I would hold that what we want now is not to counterbalance the scientific outlook with the humanities, but rather to see the new outlook spread over into the humanities, so that they undergo a revolution similar to that which science has already undergone. Nothing other than this, I believe, will solve the problem of the two cultures, but far from destroying the non-material interests associated with the humanities and religion, as some people fear, I believe this revolution would actually fulfil them.

One man and his job

Control laboratory assistant

JACK LADD is a rarity: he is a happy man who knows he is happy. At thirty-five, he has seen a lot of life: and reckons that he never had it so good as now. He was at the Normandy landings at Arromanches; he fought outside Arnhem; got back into civilian life, took a job with ICI, left it with ideas of bettering himself—and returned to ICI in 1949 to a job he has held ever since and that he considers ideal.

Ladd is a Control Laboratory Assistant in the Paints Division at Slough, where he is one of the staff of sixteen who, four at a time on continuous shifts, work on the testing of all the paint produced by the Slough factory on its way to the customer. This paint ultimately finds a home in one of three main markets: the Trade Market, where it is used for decorating purposes from top-level town builders to do-it-yourself enthusiasts; the Industrial Market, where it is applied to such products as washing machines, cash registers or refrigerators; or the Motor Market.

Before it reaches them, the paint has, so to speak, begun its life in the mixer in the Paint Shop: proceeding thence to the Progress Office, where it acquires a test card which outlines its future and the examinations to which it will be subjected.

Thence it is delivered to Jack Ladd and the others: working in three rooms, each dedicated to a special set of tests. They first meet the new batch in the Viscosity and Preparation Room, whence it will pass for their further attentions to either the Brushing Room or the Spray Room.

What tests will the paint undergo on its tour? Well, it will be tested for viscosity and for what are called general film properties. As these are not terms on the tip of everyone's tongue in everyday life, it is worth while to pause to define them. Viscosity is the speed at which a paint flows: a knowledge of which is essential to those who work on its application in any market. General Film Properties . . . if you think of Film as meaning coating, you will have the clue. The phrase embraces such qualities as quick-drying properties, hardness, gloss, elasticity.

Before the new batch arrives in the Viscosity and Preparation Room, the Division's Development Laboratory will have already determined the specified viscosity needed. The actual viscosity—the measured speed of the flowing paint—

is determined in this room. It's a comparatively simple process for once: cylinders are filled with quantities of paint, the dropping of which into 50 c.c. measures below is timed to a second.

The next testing stage may be the Brushing Room; or it may be the Spray Room. The Brushing Room is devoted to determining the air-drying of decorative paints. Here paint is tested for colour and for those general film properties already enumerated.

There are five separate tests. The first is the Colour Panel, in which a primed tin plate, upon which a coating of paint has been spun, is air-dried or subjected to radiant heat. Then there is the Glass Pour test, a microscopic search to reveal any foreign bodies in the paint; followed by the Exterior Drying test, an examination into how the paint reacts to drying out of doors. The Refrigerator test determines whether the paint will dry within sixteen hours in a temperature of 7°C. Finally the product is applied to an 18 in. steel panel for examination of such qualities as gloss, build, and flow, among others. Paints required for the Trade Market pass through the Brushing Room: those earmarked for the Industrial and Motor Markets proceed to the Spray Room. Here you will see Ladd at work on an autothinner, a machine in which, when a solvent is fed into paint, a mechanical adjustment does the work of thinning to the required viscosity determined by ICI for the benefit of the customer.

Having been thinned, the paint is tested. It is applied to primed panels so that the product can be examined for colour and our old friends, G.F.P. Whole car-doors are prepared and sprayed too, to ensure that the work is of the high standard demanded in this exacting market.

Every man of the sixteen on the job must be expert in every phase of the work. Ladd considers it would take him a month to teach a newcomer the basic skills: "after that the sort of show he puts up would all depend on his own practical ability."

Away from it all, Jack Ladd, a married man, lives in Windsor, pursuing his hobbies of enjoying a record player—he prefers opera and ballet to popular music—in winter and gardening in summer. In his garden he specialises in carnations: and you can be sure their gloss, colour, texture, and other appropriate general film properties reach a very high standard.

People and events

New Drug to Combat Heart Disease

Following reports in the *Lancet*, Pharmaceuticals Division released a preliminary statement to the press on 22nd June about 'Atromid,' its new drug to combat heart disease. The drug referred to in the *Lancet* is for the treatment of atherosclerosis, a disease of the arteries which may lead to angina pectoris and coronary thrombosis. Experience with this new drug is already sufficient to indicate a major research achievement. But the drug will not be generally available for prescription until extensive clinical trials now in progress in many parts of the world are completed.

The new drug controls the concentration in the blood of certain fatty substances, the best known being cholesterol. Atherosclerosis, commonly known as hardening of the arteries, is a condition often associated with high concentrations of these substances. Atherosclerosis is also associated with abnormalities in the blood-clotting mechanisms. For many years research workers throughout the world have been seeking a drug which would bring the concentrations of these fatty compounds in the blood back to normal without producing dangerous side-effects, and Pharmaceuticals Division believe they have found such a drug, which in addition acts to correct the blood-clotting abnormalities.

Interest in the drug is already widespread. Many clinical trials—i.e. trials with actual patients under hospital control—are under way at this moment not only in Britain, but also in the United States, Italy, Switzerland, Belgium, Holland, Scandinavia, South Africa, Australia, New Zealand and Canada.

Swiss Loan

After many rumours in the press over the past months, it was confirmed on 15th June that the Company had made arrangements for the public offer in Switzerland of an ICI loan of Swiss francs 60 million (equivalent at £1=12 Swiss francs to £5 million) with interest at 4½%. The loan, which was offered for subscription from 19th June to noon on 22nd June, was oversubscribed.

This is the first occasion on which ICI has raised a substantial sum of money outside the UK, although money has been raised in countries abroad from time to time—mainly by ICI subsidiaries—for financing developments in those countries. The move reflects the extent to which the ICI Group is becoming an international manufacturer outside its already large interests in the Commonwealth and South

Africa. Borrowings on foreign money markets will be made as opportunity offers so as not to make too great demands on the foreign currency reserves of the sterling area.

The Rozenburg Hat

A rather battered trilby hat, which had been preserved by ICI (Holland) for over a year, had its moment of glory recently. It was placed under the first pile of Rozenburg Works at Rotterdam on 17th May. The Burgomaster of Rozenburg, Mr. J. C. Aschoff, pressed the necessary button. The first pile was driven in. The hat was buried in the soil on which the 'Perspex' plant will be built.

The owner of the hat—**Mr. A. B. (Peter) Crooks**, engineering director of General Chemical Division.

Why such reverence for an ancient trilby?

The story starts in February 1961, when Mr. Crooks and **Mr. Eric Driver**, civil engineer, General Chemicals Division, accompanied **Dr. S. B. Cormack**, technical director of ICI's European Council, on a site-finding tour of Holland. They decided Rozenburg was the most satisfactory site. As they looked across the barren ground a strong wind blew Mr. Crooks's trilby into the mud. The hat was bequeathed to the site in the hope that



A trilby's moment of glory

if Rozenburg was indeed chosen, the trilby would be buried beneath the first pile.

Rozenburg was chosen. And the hat was buried deep in the soil on which in the next ten years the first major European complex of ICI manufacturing plants will arise.

The Rotterdam project is well up to schedule. A mammoth preliminary job has already been completed. Over a million tons of sand have been dredged from the nearby river and spread over 45 acres of the site in order to raise the level 15 feet—to well above the high tide mark.



Royal visitor. ICI had one of the largest stands at the recent British Trade Fair in Stockholm. Here Princess Alexandra is seen

visiting the 'Terylene' section of the stand with Mr. H. J. L. Fitch, stand manager

Birthday Honours

The names of three ICI employees appeared in this year's Birthday Honours List. **Mr. Basil Goodfellow** and **Mr. Norman Langdale** received the OBE and **Mr. Alfred Addison** the MBE.

Mr. Goodfellow, who is techno-commercial director of ICI's European Council, gets his award for services to mountaineering. He was honorary secretary of the Himalayan Committee, which organised

Himalayas, New Zealand, the Alps, Britain, and many other parts of the world. Another of Mr. Goodfellow's interests is photography, and many of his pictures—often of mountain scenes—have appeared in the pages of the *Magazine*.



Mr. Goodfellow

the successful assault on Mount Everest, and is a past president of the British Mountaineering Council and a past chairman of committee of the Mount Everest Foundation. A noted mountaineer, he has over the past 40 years climbed in the



Mr. Langdale

The news of Mr. Langdale's award broke shortly after he had stepped ashore off the liner *Arcadia* which had brought him and his family back from India. He has been in India for the past two years helping to establish the College of Engineering and Technology affiliated to Delhi University, a task for which he was specially seconded from Wilton Works. The new College of Engineering and Technology of which he has been Director of Training and Placements—an appointment carrying

the status of professor—is a joint project between the British and Indian Governments and British industry. Mr. Langdale returned to duty with ICI on 1st August.

Mr. Alfred Addison, who got the MBE, is personnel officer at Paints Division's Stowmarket Works. Outside work he devotes himself to a long list of community activities. He is a JP and sits regularly on the local Bench, is a member of Gipping Rural District Council and chairman of Stowupland Parish Council. He is also



Mr. Addison

chairman of the committee of management of Stowupland Primary School, a member of the Board of Governors of Stowmarket Grammar School and vice-chairman of the Suffolk Federation of the Workers Educational Association. He has a great fund of



New Labour MP. Dr. Jeremy Bray, the new MP for Middlesbrough West Division, with his wife and daughter photographed at an informal press conference held in the garden of his home at Nunthorpe on the morning after his election. Dr. Bray, formerly a mathematician in the Work Study Department at Wilton, took his seat in the House on 26th June

knowledge about old churches, buildings and folklore and has contributed articles to the *East Anglian Magazine*.

A further award of interest is that of the CBE to **Mr. L. G. Burleigh**, former head of Central Transport Department at Millbank and currently chairman of the Transport Users' Consultative Committee for London Association.

Productivity Post

Mr. J. C. H. McEntee, chairman of the Wilton Council since 1957, has recently been appointed productivity studies manager, responsible to the ICI Technical Director, in London. The post has been newly created and reflects the Board's desire to effect central co-ordination of the varied efforts being made throughout the Company to achieve the maximum efficiency in the utilisation of man-power. Mr. McEntee has no intention of setting up a large department, nor will the Divisional or departmental responsibilities be in any way diminished, but it is fully recognised that in relation to productivity as a whole, procedure or policy in one field has a



Mr. McEntee

strong influence on the work to be done and, therefore, on the effort demanded in another field. Central co-ordination of all these inter-related efforts will make for increased efficiency.

Mr. McEntee's survey will be carried out in the widest sense, taking account of all

activities, whether in an office or on the shop floor, and with the fullest participation of Divisions and Head Office departments.

Reorganisation at Billingham

On 6th June Billingham Division announced its decision to concentrate manufacture of ammonia and related products at Billingham on Tees-side, Heysham in Lancashire, and at the Severnside site. As a result, its smaller factories at Dowlais in South Wales and at Prudhoe-on-Tyne in Northumberland will be closed.

Manufacture of methanol at Dowlais will cease almost immediately, and ammonia is unlikely to be made there after the middle of 1963. At Prudhoe it is expected that ammonium sulphate production will cease during 1964, although ammonia may continue to be made there for up to a further twelve months.

This change in Billingham Division's manufacturing arrangements arises from the recent successful technical developments in the gas-making processes used for ammonia and methanol (reported in our May issue) and from changes in the pattern of demand. These important developments, based on the use of oil as raw material instead of coke, have transformed the economics of ammonia and methanol manufacture. The Division's plant at Heysham in Lancashire has already been converted to the new process, the Billingham plant is being changed over to it, and the new ammonia capacity being provided at the Severnside factory will also use the new process. In comparison with these factories, Dowlais and Prudhoe, even if changed from coke to oil, would suffer major disadvantages arising from their locations, which were originally chosen for wartime security reasons; the transport costs of both raw materials and finished products would be quite uneconomic.

Printing Award

The Kynoch Press, Birmingham—one of the IMI (Kynoch) group of companies—has gained the premier trophy in the *Printing World National Letterpress Annual Awards* for 1961. The samples of work entered by The Kynoch Press for this competition, which is judged on normal production jobs, were three technical publications, one each in English, German and Russian. On this basis The Kynoch Press was awarded the silver cup presented by the London Trade Stringing Service—"the National Letterpress Trophy for the best job judged on all aspects."

This year, as one of its less routine commitments, The Kynoch Press printed a special copy of a history of Wednesbury, one of the Black Country towns, which was presented to the Queen when she visited the town during a tour of the Midlands.

The presentation copy was set, printed and bound at The Kynoch Press using brown niger goatskin, with the coat of arms of Wednesbury, inlaid with coloured leathers and blocked in gold, appearing on the front.



A pride of Jaguars. Not the start of a Jaguar Works race, but the day when the first Mark X models were released to dealers.

Each car is "practically dripping" with 'Novon,' 'Vynide,' 'Vulkide' and 'Rexine' from ICI (Hyde)



Northern Counties Championships. Held at Billingham again after 10 years, the Northern Counties Athletics Championships, which took place on Saturday, 23rd June, brought together some of

the country's leading athletes to improve championship performances in seven events and equal the previous best in two others. Our picture shows the field for the Three Miles



Kynoch Works Centenary. Kynoch Works, for 36 years the centre of ICI's metal-producing interests, celebrated its centenary with a gala on 2nd June. Special attractions included the Kynoch Centenary Exhibition, a "Miss Kynoch" contest, a motor cycling display by a unit of the Royal Corps of Signals, and a mammoth firework display. Below: Mr. S. P. Chambers, ICI Chairman, opened the gala. Here he is seen cutting the ceremonial tape. Also in the picture are (left to right) the Lord Mayor of Birmingham, Mrs. S. Elstub, Dr. James Taylor (ICI Director and Chairman, IMI) and Mr. S. Elstub (Chairman, IMI (Kynoch) Ltd.)

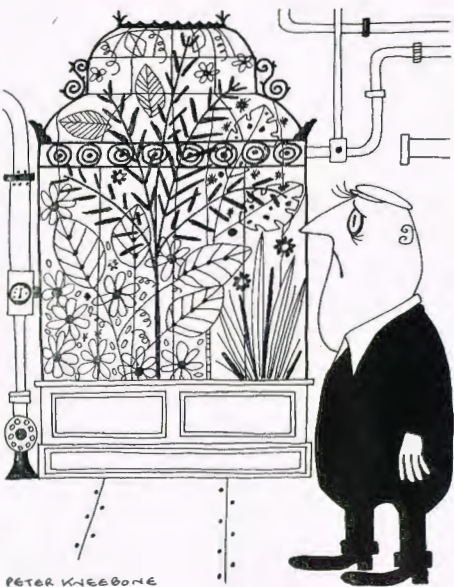


Greenhouses at Winnington

The use of polythene for constructing greenhouses in the garden has led to the solution of a fume problem at Alkali Division's Winnington Works. Large "greenhouses" of polythene over a wooden frame completely envelop the rotary filters in the ammonia soda plant and prevent most of the strong ammonia fumes from escaping into the atmosphere as they had done previously.

The filters are used in the manufacture of caustic soda, where the sodium bicarbonate is washed in concentrated ammonia to remove the sodium chloride present. The ammonia is heated during the process and vaporises, giving off strong fumes. Since the introduction of the "greenhouses" the atmosphere in the plant is considerably cleaner and much more pleasant to work in.

The "greenhouses" are covered with 'Melinex' instead of polythene in places where it is necessary to inspect the filter, and hinged windows have been fitted to enable the operator to collect samples of bicarbonate.



The idea for fitting "greenhouses" over the filters came from **Mr. E. Harding**, the plant manager, who has been using polythene to make greenhouses in his garden for several years, and now has one over 72 feet in length. The advantages of polythene for the industrial "greenhouse" are that it is cheap and easy to replace, and that it will mould round awkward parts of the filter housing.

Mr. John Kennedy

As we go to press we learn the sad news of the death of **Mr. John Kennedy**, who as general manager of The Kynoch Press at Witton was for many years very closely associated with the publication of the *Magazine*.

Although he continued bravely in his



Consignment from Severnside. One of the first consignments of ethylene oxide leaves Severnside Works in a Heavy Organic Chemicals Division special-purpose tanker. A fleet of these vehicles, with

insulated high-pressure barrels specially constructed for the carriage of ethylene oxide, has been put into service to coincide with the commissioning of the new HOC ethylene oxide plant

arduous job at The Kynoch Press, John Kennedy suffered from ill health for some years before the strain proved too much and forced his premature retirement from the Company last December. The last six months or so were spent almost continually in hospital or under treatment, and all who knew him were very sad indeed to hear that he had died so soon. When he decided to retire he was looking forward to fulfilling



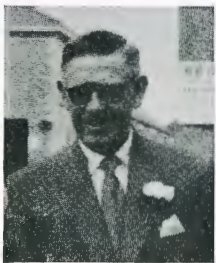
Mr. John Kennedy

his lifelong ambition to explore in detail the countryside of the British Isles, in particular the Hebridean Islands of Scotland.

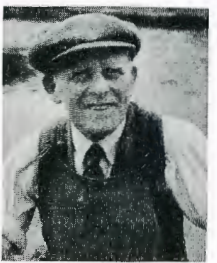
Born in Glasgow and educated at Perth Academy, he started his printing career as a trainee works manager at William Collins & Sons Ltd., Glasgow. He joined The Kynoch Press as office manager in 1933, and after several years as works superintendent became manager in 1944.

50 Years' Service

During the past two months the following employees have completed 50 years with the company



Mr. A. M. Coughlan
Alkali Division
(4th June)



Mr. J. N. Lightfoot
Alkali Division
(6th July)



Mr. N. Weedall
Alkali Division
(1st July)



Mr. R. C. Whale
Nobel Division
(2nd July)

Something to Sing About

The two-minute cinema advertising film "Sing a Little Song about 'Terylene'," made jointly by Fibres Division and Marks and Spencer Ltd., which has been going the rounds of cinema circuits during the past few months, was recently awarded the first prize in its category at the 1962 International Advertising Film Festival held in Venice. The film, which was one of four submitted for the Festival by Marks and Spencer, competed against entries from all over the world.

It was made for ICI and Marks and Spencer by Saward, Baker Ltd., the music was by Norrie Paramor, and the lyric, which sings the praises of 'Terylene' made the St. Michael way, was specially written and sung by Paddy Roberts.

Retirements

Some recent announcements of senior staff retirements are: **Alkali Division:** Mr. E. H. Sale, Joint Managing Director (retired 31st May). **Billingham Division:** Mr. J. A. L. Young, Personnel Director (retired 31st July). **General Chemicals Division:** Mr. R. L. G. Donaldson, Staff Manager (retired on health grounds 31st May). **Nobel Division:** Mr. L. Hall, Joint Managing Director (retiring 30th September). **Scottish Agricultural Industries:** Mr. I. MacCormick, Commercial Services Director (retired 30th June). **ICI (India):** Mr. F. G. Lamont, Joint Managing Director (retiring 30th September). **ICI (New York):** Mr. J. W. Squirrell, Commercial Director (retiring 30th September).

All at stake down under

by Denzil Batchelor

THE forthcoming tour of Australia is the most momentous and important in the history of cricket. Its success or failure will determine two things: the future of the game as a part of the Australian way of life; and the claim of England to be regarded as Australia's chief rival for supremacy among the cricket-playing countries of the world.

Until the West Indian tour in 1960-1, cricket, once the dominant interest in the Australian scheme of things, had all the appearance of a spent force, a dying culture. I remember as long ago as 1955 arriving at the Adelaide Oval to see a Test which determined who won the rubber that season. There was not the least difficulty in buying a seat, without queuing, for that game—but you had to have political influence to get into the (unofficial) Australia v America lawn tennis match being staged next door.

Australian triumphs in the Davis Cup and the world's leading golf tournaments had, for the time being, stopped all real public interest in cricket, a field in which (quite apart from the frequent boredom of the first-class game), a series of defeats had drained national enthusiasm to the bitter dregs.

Well, since then things have changed in Australia. Frankie Worrell's side altered the national attitude towards the game, as a revivalist meeting may change and re-charge the hearts and souls of an audience steeped in apathy. The West Indians arrived in October 1960, almost unnoticed—their early matches drew scanty gates and a minimum of newspaper coverage.

On the 10th February 1961, they drew a world record crowd of 90,800 to the Melbourne stadium: 274,404 spectators attended during the five days of this final game, paying £A48,749, the highest receipts for any match in Australia. A week later the citizens of Melbourne downed tools to turn out, some say a million strong, to say farewell to the West Indian team—the defeated side, not the winners in the most thrilling Test match series in history. That is what this year's England side has to follow.

Can it play cricket exciting enough to maintain the level of public interest that the West Indians created? Can it play well enough to convince Australia that England remains the sempiternal rival for the unofficial, all-important world's championship of cricket?

Two things have happened since Frankie Worrell's West Indians set the spark flaming two years ago "down under."

First, the Australians have come, seen, and conquered our own strength at home. They did it by the skin of their gritted yet aggressive teeth. They squeezed home, you will remember, by two Tests to one: and one of their victories was achieved at Old Trafford after England had 150 up with but one wicket down, and only 256 needed to win.

If, however, England had won that match, they would have been lucky winners of the series; for both the drawn Tests were moral victories for the Australian team.

Since then we have sent last winter's touring team to the East: to win against Pakistan and lose to India. The only bowling successes of that tour were Tony Lock and David Allen who against Australia in 1961 took 13 wickets for an average of 27 apiece on pitches that were kinder to his spinners than any he could find in Australia.

Already you will detect a whiff of pessimism about my diagnosis—but there is far worse to come. The tour itself is hardly tailored to suit an experimental side, determined to nurse its strength for the all-important Test Matches. It shows a big increase in the number of up-country games, and a rise from seventy-nine to eighty-four playing days in five months—to be followed by another month's cricket in New Zealand.

Test matches have been reduced from six days to five, each of six playing hours instead of five: a good move in the campaign to outlaw slow play and the risk of drawn games. The Australian decision to retain eight-ball overs may well add to the burden of our bowlers, unused to exerting themselves at more than six-ball stretches.

All in all, there is every prospect of this being the most gruelling tour ever undertaken by an England side: as well as the most important.

But in the final analysis it is cricketers rather than programme-planners who win and lose rubbers; and a first glance at our playing potential—I write before the team is finally chosen—by no means inspires confidence. Three of last year's leading six batsmen are "foreigners": Alley of Australia, who at 43 would certainly have been forced into retirement in his own



Melbourne Cricket ground, scene of many thrilling contests in cricket and football. Up to 96,000 spectators can be accommodated in the reserves

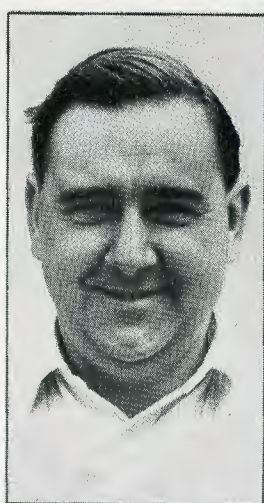
country; India's captain, the Nawab of Pataudi; and the West Indian, R. E. Marshall, now a Hampshire star.

It is true that we have young, or youngish batsmen, coming on. Before G. Pullar had played in a Test, G. O. Allen, then chairman of selectors, told me he thought this Lancashire player, now only 27, the most promising opening bat he had seen for years. M. Stewart (Surrey), though rarely lively, is another first-class opening bat: so is G. Atkinson (24), who has been playing for Somerset since he was 16.

The middle-batting potential is less inspiring. E. R. Dexter is marvellously bold: a stroke player of dazzling genius. M. C. Cowdrey is a seasoned pastmaster, though not 30 till Christmas Eve. K. F. Barrington was one of the few unqualified successes on last winter's eastern tour, with dazzling centuries in the first three Tests against India. P. H. Parfitt and R. A. Gale of Middlesex are both handsome prospects—I saw Gale hit six sixes in a county match at Lord's before the opposition had shed its three sweaters apiece. There are also veterans like the

Rev. D. Sheppard and Tom Graveney—but, considered nationally, it is a short list indeed. It is an even less inspiring story when we come to scrutinise our bowling prospects. To begin with, you must remember that never in the past fifty years has an English spin-bowler dominated a Test series in Australia. It is the faster bowlers who have made their mark—Barnes and Foster, Larwood, Tate, Tyson have been some of our heroes.

Well, anyway, we have no great leg-spinner, we have come to the end of an



COLIN COWDREY



TED DEXTER



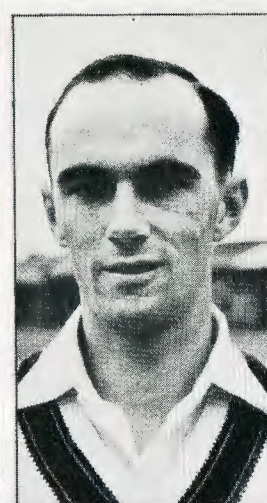
BOB GALE



GEOFF PULLAR



RICHIE BENAUD



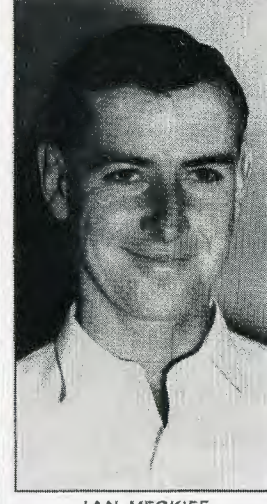
IAN CRAIG



ALAN DAVIDSON



NEIL HARVEY



IAN MECKIFF



NORMAN O'NEILL

era. For years our fast bowlers reigned paramount: Tyson, Statham and Trueman. Now Tyson belongs to history; Statham is 32; Trueman 31—and last year's new recruit, J. A. Flavell, is 33 and L. Coldwell 29.

Against that the gigantic G. D. McKenzie, flashingly fast and ominously successful during the Tests of 1961, is only 21 now; while F. M. Misson is only 23.

If youth strikes an icy terror into the marrow of your bones, remember that W. M. Lawry and N. C. O'Neill, the

most successful batsmen on the England tour, are both 25; R. B. Simpson is a year older; B. C. Booth is 28, P. J. Burge is just 30.

All these, of course, are blooded veterans. The exciting thing is to look at what happened in Sheffield Shield cricket during the season of 1961-2. Richie Benaud, next season's captain, was in prodigious form with the ball: so was Alan Davidson, now the world's best fast bowler and all-rounder who hit centuries against Victoria and Western Australia in a single week.

Both O'Neill and Harvey had disappointing seasons, but Ian Craig, who at one stage retired from cricket, had so remarkable a summer that he re-emerges as a 27-year-old veteran Test candidate. Ian Meckiff, the fast bowler who missed the 1961 tour of England, has also regained his sharpest form.

But it is the new names that provoke interest—and apprehension. Perhaps the most interesting are two South Australian 19-year-olds: Ian Chappell, a batsman, and David Sincock, a red-haired spin and googly left-hand bowler declared to be

the most promising Australia has discovered for years.

John Martin is an off-spinner and slogger; John Potter of Victoria hit a notable century against the South Australian side, the only team to beat New South Wales.

Add to those men of promise such batsmen as John Lill and I. McLachland of South Australia, and Barry Shepherd captain of Western Australia (the season's most successful bat), and you have a nucleus of new names who may make history next season.

A. Connolly, the Victorian fast bowler, and N. Hawke, a South Australian only overshadowed by Davidson on the season's record, are among the rising stars of the country's attack: but Australia expects as much from neither as from Sincock. If anything should happen to A. W. T. Grout of Victoria and B. N. Jarman of South Australia, New South Wales have a superb wicket-keeper in D. Ford.

Youth, the tradition of victory, and the spirit of adventure demanded of home crowds—all these are inspiring influences

working for Australia. Their team must start strong favourites in the most important Test series yet played.

It is of no importance at all whether (like the Australians in 1958-59) we upset the odds and the apple-cart. It is absolutely vital that, win or lose, we play cricket that draws spectators and delights them when they return to watching the game. Our side's motto might well be found in Addison's *Cato*:

'Tis not in mortals to achieve success,
But we'll do more, Sempronius, we'll
deserve it.

Putting pieces in the papers

by Geoffrey Richards

WHO put that piece in the paper about ICI? We are often asked that question, and the answer is very simple. The editor—or one of his staff—put it in. We certainly didn't. It is one of the sad facts of life about press relations that no press officer can be sure that any piece will appear in any paper. The best he can do is to ensure that the story is brought to the attention of the journal. That sounds simple enough, but take a closer look. What story should be brought to the attention of which journal? There are hundreds of papers of various types, but none of them will publish anything unless they judge it to be of interest to their particular readers. Human nature being what it is, no two sets of readers are interested in exactly the same type of story. Then, papers are published at different times of the day and in all parts

of the country, and as well as newspapers there exist hundreds of specialist journals covering every trade and profession, plus innumerable technical reviews and weekly commentaries. To complete the picture there are the radio and TV news organisations and the news agencies. All of these are potential markets for stories about ICI—stories that we think are interesting and deserve wide circulation. Potential markets, yes; but how to realise that potential? How can we ensure that the story we have in mind does indeed get the circulation it deserves?

There are many rules, but they add up to a simple formula. Have a good story, write it in a suitable form, and distribute it at an appropriate time to all those journals known to be interested in that particular subject. And do not send it to anyone else, for the law that governs press relations says "bad stories drive out good," a saying that means simply that every story with your name on it which reaches an editor's desk but does not get into print means a black mark against your name in that man's mind. Pressmen are always overworked, and they have no time to waste on tales that are simply not worth printing in their particular journal.

The Press Officer must study the market with care in relation to each particular story, and "tailor-make" each circulation list. The ready-made trade has no place in press relations. He must

study also the details of publication times and dates. Editors are not happy to receive a press release just after the paper has "gone to bed."

Let us look at some of the detail involved when placing a story about ICI in the Press. Starting at the beginning—a good rule for all things concerned with newspapers—first of all there has to be a real "story," such as the Press mean by this term. To find this story you must have a newsgathering set-up within your own organisation, and you should have friends, or at least acquaintances, everywhere in the Company. Perhaps the man on the spot is too close to something of interest—a new plant, a new process or a soon-to-be-launched product—to be aware of its potential news value. Or perhaps he is just too busy doing the job to be concerned with the advantages of talking about it.

Dull stories must be avoided like the plague. In press relations what comes first is not how interesting a story may be to those within the organisation, but whether it is of interest—or can be made of interest—to those outside, i.e. the general public. First, then, it is necessary to find a good subject for a story. Then the story itself has to be well written. Nobody expects fine writing in a press release, but once again it must follow certain rules. It must, for instance, start with the NEWS, and not be written as

though it were an advertisement or a think-piece in a literary journal. Press releases are for facts. It is for journalists to add their own comment if they wish.

When the story has been written, reproduced legibly with plenty of space between the lines (to simplify sub-editing) it is time to distribute it, but what part or parts of the newspaper world are likely to be interested? Is it hard news, the sort of world-shattering event that will make the front pages of national dailies? Or is it of local significance, for strictly regional distribution? Does it have a trade or technical angle, and will it interest specialist journals? Should it go broadly to editors and news editors, or be addressed more specifically to specialists such as science, fashion or city editors? Is there any overseas interest, and if so should it be sent to London correspondents of overseas papers or direct to their home offices—or should the Press Officer rely on an overseas news agency? Are there any particular groups of papers requiring special treatment—such as the local papers in the area concerned—who might appreciate an early tip-off so that they can arrange photographs or interviews?

Whatever the answers to these and the many other queries that arise, the only sure thing is that every press release is an individual. It is rather like a rocket that specialists create, cosset and finally send

off into the blue, knowing that once the count-down is complete there is little, very little, that anyone can do about it any more. Out it goes alone into the world to be a success or a failure. But what of the mechanics of getting it out?

By the time the list of appropriate recipients is completed, there may be hundreds of names on it. Some will want the story urgently. To those it will go by hand, or phone, or cable. Weeklies and monthlies have a more leisurely timetable and can receive their copies by post unless they are just on the point of going to press (of course you know the publishing date of each of them). Radio and TV need special treatment. Finally, the various internal Company publications must not be forgotten.

Now the messengers have been despatched—and their job is not always easy, for many a city office of an important paper is away in the depths of the City. The phone calls have been made to the agencies and others with special requirements as to timing, and the exercise might be thought to be over. That would be a grave mistake, for this is the time when anything can happen. Questions! Unexpected questions some of them, but there should not be too many of these, because the Press Section has taken the precaution of providing itself with a detailed brief giving details not important

enough for the release but likely to be raised by particular journalists. In other words, it will be armed with all the necessary background information, together with a stock of pictures of the personalities involved in the story. In short, every question that could be asked has, with luck, been anticipated, and no journalist will find the Press Section wanting. If it is, it must know where to go for the answer. Newspapers, of course, do not keep ICI office hours, so the home phones of Press Section will be ringing later, and by that time it is not always easy to find the appropriate Company expert. A good memory and a comprehensive filing system come in handy here, together with a list of home phone numbers of Division people who know, or can find, the answers.

Questions can be the hardest part of the job, but if, after the story is released, nobody phones, a species of unease creeps over the Press Officer and his colleagues. Have all the messengers lost their way? Was the story so dull that nobody cared about it? Was something left out during the count-down? There is no way of finding out until the following morning, when they will be able to measure the success or failure of this particular blast-off from the number and quality of the pieces about it in the papers. Until then, they just have to keep hoping that the story is well and truly in orbit.

NEW DRUG TO COMBAT HEART DISEASE

MAJOR ACHIEVEMENT BY I.C.I. RESEARCH WORKERS

Reference in this week's "Lancet" to a new ICI drug for the treatment of heart disease calls for a state-

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With the compliments of
PRESS SECTION

AL PUBLICITY DEPARTMENT

AL CHEMICAL INDUSTRIES LTD.

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TELEPHONE: VICTORIA 4444

NEW DRUG 'A' MAJOR STEP IN HEART CASES

DAILY TELEGRAPH REPORTER
A NEW drug to treat hardening of the arteries was described by ICI scientists yesterday as a "major scientific achievement." Hardening of the arteries can cause coronary thrombosis.

The drug, called Atromid, was produced after five years' work by ICI's £1 million research organisation. It is being used in clinical trials in Britain and a dozen other countries.

Some supplies are expected to be available for heart sufferers in Britain in the next two or three months.

The drug controls concentrations of fatty substances in the blood. For years research workers have been seeking a method of control to bring the blood back to normal without dangerous side-effects.

NEW DRUG FIGHTS HEART DISEASE

By NICHOLAS LLOYD

DOCTORS yesterday reported successful trials with a new drug which brings fresh hope to people with heart diseases—the Western world's major killer.

Patients with heart disease given the drug, Atromid, yesterday, say Dr. J. H. Needham, a leading heart specialist, "are no longer in the danger zone."

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The price of goodwill

A goodwill gift of a prepared book and pen sent by the Suffolk Needham Market to a town in Massachusetts.

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NEW I.C.I. DRUG TO COMBAT HEART DISEASES

By Our Scientific Editor

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HEART MENACE: A NEW DRUG HOPE

By RONALD BEDFORD

NEW British drug has been discovered to combat heart disease—newly developed I.C.I. drug.

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RESS

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New heart drug hope

By CHAPMAN PINCHER

A NEW drug to prevent heart attacks from coronary thrombosis has been developed by British scientists.

Tests on 20 patients reported today show the drug, given by mouth as a yellow capsule, to be highly promising.

Scientists worked for five years on the theory that fatty substances in the blood fur and block up the coronary arteries supplying the heart muscle.

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Whom the Gods love

by James Taylor

I OUGHT not to be writing this as I have no special knowledge of the subject. It all started at a cocktail party when Henry Maxwell and I got talking about longevity. No doubt he was mellowed by that time and the fine balance of his judgment disturbed. Anyhow he asked me to write an article for the *Magazine*. This is it.

The best means of ensuring long life is to belong to a long-lived family. This I know, but as I talked to Henry it was revealed to me that the secret of long life is to be gifted with great intellectual curiosity. Take Bertrand Russell, for example. My mother-in-law comes from a long-lived Scots family and, apart from being great walkers—not “Ban the Bomb” marchers—which presumably keeps their systems working smoothly, they are all intensely interested in people, in things and in travel. Mother-in-law took a trip round the world by air alone at a very advanced age, and the mother of a cousin, who is 103, still does beautiful, intricate embroidery and is interested in everything. The curious keep a hold on life and survive, while the bored and incurious fail from ennui. I remember well Lord McGowan coming to IC House on his

83rd birthday and, after lunch, during his traditional speech, saying that unless ICI invented some new wonder drug, half of his life was over. Such was McGowan's vitality and sustained interest in affairs one felt this not to be improbable. Most business executives do not have longer than average spans of life: they only appear to do so because they age quickly. This is well seen in America, which someone said was a country of old/young men and young/old women. Many put the blame for this on the pursuit of riches by the men and the utilisation of riches by the women. This may well be true. A colonial cousin of ours once remarked to a rich relative who was a mite careful: “Auntie, you'll be the richest woman in the graveyard.”

Another observation to Henry was derived from my experience in the explosives trade, in which I was brought up. It was commonly believed that blackpowder (gunpowder) workers lived long. This was attributed locally to the fact that they trusted in God and kept their powder dry, but this is doubtful. Gunpowder, a mixture of sulphur, nitre and charcoal, has, in fact, medicinal properties. Indeed,

some Africans use it as a medicine: sulphur for the blood, nitre for toning up the system and charcoal for indigestion. In any event, many blackpowder workers do live long: there was one who married long after he had retired, and, moreover, raised a family to boot. Perhaps I ought to mention that a special licence is needed to buy blackpowder, if not to raise a family. Anyhow, if you take my advice, don't rely on gunpowder, it's dangerous, but a greater danger is obesity, one of the current-day hazards. This creates a bad life risk, so keep slim, if you can, and above all, become curiouiser and curiouiser.

I thought I had finished this article and had escaped to recuperate in the south of Spain—my younger son is a surgeon in the Military Hospital at Gibraltar, in charge of the Barbary Apes—but even on the Rock I am not safe from Henry, who has asked me to add another 250 words to the script—I think he has to fill one page with it. I don't really mind because I have just read an article in the *Daily Mail* which reports that Hunza, 8000 feet up in the Himalayas, is “an island of tranquillity” where people live to an astonishing age. The writer reports “This



*The curious keep
a hold on life*

morning I talked to a man of 118 who had just finished a five mile walk. Men of 80 look like 40. Yesterday, I saw the newborn son of a chuckling father aged 89.” I pass this information for what it is worth; as far as I am concerned it supports some of my theories and I've sent an aerogram to the 6th floor asking my secretary to get the Travel Agents to work out an itinerary for my Sabbatical Leave. If I don't get it I don't know what I shall do. We are an ageing population and this presents serious problems, especially for retired people and particularly in organisations like ICI where the retirement age is comparatively early. Many serious studies have been made and there is a good deal of literature on the subject, I know, because I have not long to go and have dipped into it. The worst attitude to take up is that illustrated by a story I read where an executive who had recently retired met a colleague who asked him how he was getting on. His reply was “I waken up in the morning and if I don't see my obituary notice in *The Times*, I know it's time to get up.” No intellectual curiosity, you see, and probably not much chance of survival.



AUGUST AND SEPTEMBER IN THE GARDEN

by Percy Thrower

A FEW weeks ago I visited a local rose nursery to see the roses at their best, and what a pleasing sight it was to look over those acres of roses, all well grown. It was apparent it was the work of people who really know their job.

Nurseries like this are open for inspection and I came away with the firm opinion that many more people should take advantage of them. I was particularly impressed with the standard roses; each had a fine head of growth and a mass of quality blooms. The best of the rose season is approximately from late June to September, a long season in comparison with that of many other flowers, and if you anticipate buying and planting roses this coming autumn or winter, then it is policy to see them growing in the nursery and choose the ones you like. There were so many, including a number of very good new ones, that choice was difficult.

This again is the month of the flower shows and these newer varieties of roses, as well as a lot of our old favourites, will be on show. We can always depend on a fine display of roses both locally grown and from much further afield. Those I made a note of and ones you might like to look for at the shows or in a nursery include several floribunda roses—a lot of improvements have been made in these during the past few years—and some hybrid tea roses.

I like the floribunda rose *Plentiful*, with its cup-shaped flowers almost like a Bourbon rose, crammed with petals of warm glowing pink. An added attraction

Rose Queen Elizabeth

to me is that it is a scented floribunda rose. *Orangeade* still holds its place for its sheer clarity in colour, standing out among the many others. It has huge clusters of flowers of pure sparkling orange with golden yellow stamens. *Golden Slippers* caught my eye too; this has large semi-double flowers, in some cases five inches across. The flowers are a light orange running to gold at the base of the petals. For those who like white, *Iceberg* is one to remember, the pure white will set off all the other colours in the garden. *Orange Sensation* lived up to its name last year and will hold its place for a very long time. This, like other good introductions, received a Certificate of Merit and a Trial Ground Certificate from the National Rose Society.

Among the hybrid tea roses I like the colour of *Superstar*, but it does not stand bad weather as I think a good one should do. *Westminster* is coppery salmon with a gold reverse, but I like this for the real old-fashioned fragrance even more than the colour. A rose to really stand up to all kinds of weather is undoubtedly *Rose Gaujard*. It is an exhibition rose, high in the centre, large and full, and has whitish pink reverse to the richly coloured petals. *Wendy Cousins* and *My Choice*, like the good old *Peace*, are here to stay and will be seen on many of the show tables. A really good rose of recent introduction is *Christian Dior*, an elegant name for a good rose. There will of course be many others even more modern, but possibly no better, to see as we visit the shows.

A joy in rose growing this year is being able to keep the bushes free from greenfly with so little effort. This year's introduction of *Abol X*, the new sap systemic insecticide, is a real boon to us gardeners. The insecticide is absorbed into the sap of the plants and all greenfly feeding on the roses are quickly destroyed. By the way, I add *Tulisan* to the *Abol X* to control mildew and black spot. What a blessing it has been to us who grow vegetables too; no more trouble with black-fly on the broad beans or runner beans. One spraying in May has this year kept my broad beans completely free from black-fly and also prevented an attack on the runner beans.

I am feeding my roses again in August as I did last year and it does, I am sure, help the bushes to continue flowering until late in the autumn. Round each

bush I sprinkle a small handful of 'Plus,' the organic-based all-purpose fertilizer which roses, like so many other plants, including the grass on the lawn, really appreciate.

Preparing for Winter

September must be a month of preparation for the shorter and colder days which surely none of us really look forward to. In the midlands we would be unwise to consider ourselves safe from frost after about the third or fourth week in the month, and there are many things which must be brought inside for protection before then. This applies more to flowers than anything else, and it is then that we should begin preparing and planning for next year and deciding which plants and flowers we want to keep for next summer.

Geraniums, although considered by many to be old-fashioned, are still a very good stand-by. Cuttings of these should be put in before the end of September, otherwise a lot will be lost through damping off, a fungus disease which affects so many plants and seedlings in frames and greenhouses during the winter months.

The old plants can be lifted and kept for next year by planting them in fairly deep boxes. During the winter the soil must be kept moderately dry; they require very little water during these months. After lifting, the largest leaves can be picked off. There is then less risk of them being affected by fungus which sometimes begins on the leaves and then affects the stems.

Fuchsias can be lifted and kept in the same way and, like the geraniums, all they need is to be kept from the frost and given very little water until the days begin to get longer and warmer. Cuttings of fuchsias can be put in at this time too. These need only be the tips of young shoots two to three inches long. They will root quicker and better if they are put in a frame or box which can be kept close and humid. I find the hormone rooting powders help very considerably with rooting cuttings of fuchsias, but little or no advantage where geraniums are concerned.

In the vegetable garden or allotment there will be harvesting and storing to be attended to. Onions must be lifted and laid out in the sun to ripen off; it is only the well ripened bulbs which will keep

through the winter. Those with thick necks above the bulbs never ripen off properly and if stored with the others may decay and affect the others near them; such ones should be put aside for immediate use. Onions keep best if they are stored in a cool dry airy place; if they are tied in ropes or small bundles and hung up the air can get all round them.

Carrots and beetroot will need to be lifted and stored. While the tops can be cut off carrots—cutting them close to the root—beetroot tops should be twisted off, otherwise the root may bleed and the colour will be spoiled. Both these can be stored in boxes of slightly moistened sand or in small clamps. Maincrop potatoes must be lifted too as soon as the skins are set. The test for this is to rub the thumb nail over a tuber. If the skin scrapes off easily then it is best to leave them for another week. They must be stored where neither light nor frost can get to them.

Outdoor tomatoes and marrows must be gathered and brought inside before frost begins; if the marrows are ripe they will keep in a cool place for months, and tomatoes in a moderate room temperature will continue to ripen until Christmas.

If there are fruit trees in the garden then gathering should be done as and when the fruit is ready. Apples must never be picked until the fruit comes away from the branch by carefully lifting it in an upward direction. To gather apples before this may mean that they will shrivel when stored away. It may be several weeks before such varieties as *Bramley's Seedling*, *Newton Wonder*, *Laxton's Superb*, and other long keeping varieties will be ready for gathering: do not be misled by a few windfalls. Pears should also be tested for readiness before they are gathered. Ripening will continue after they are stored. To have pears in perfect condition means looking over them every day because once a pear is ripe it quickly goes sleepy and is ruined. Store them where you can have easy access to them.

Any apples or pears affected by brown rot must not be left on the trees, otherwise the fungus spores will over-winter on them and affect next year's crop; those from the trees should be gathered and burned, as well as those lying on the ground round the trees. Under no circumstances should a fruit with the slightest speck of brown rot fungus be stored with other fruits.

SWITZERLAND a minor miracle

Jeffrey Jackson

Recently ICI successfully raised a loan of 60,000,000 Swiss francs, or approximately £5,000,000, on the Swiss market, the loan being over-subscribed. Added interest is thereby given to this inside glance at a small European country which has been described as almost a Common Market in itself.



Open-air voting in the Landsgemeinde

NOT so long ago, my windows looked out on to the houses of a London street. Now they look out on to the long line of the Jura Mountains, covered with snow as I write. The mountains are in France, but the house is in a Swiss village—a curious mixture of modern blocks of flats and farmhouses built in the local traditional style. A short bus journey takes you into Geneva, most international of Swiss cities, headquarters of the European Office of the United Nations, and of many of its specialised agencies, such as the World Health Organisation and the International Labour Office. About one-quarter of the population, in fact, are foreigners from all over the world, including 20,000 international officials and their families, as well as large contingents of manual workers from Italy and Spain.

Living abroad gives you the chance of becoming familiar with a different way of life to an extent impossible to the tourist. It also makes you look at familiar problems from a new angle.

Before I came to live here, I suppose that if someone had fired the word "Switzerland" at me, the mental picture called up would have been the usual one of mountains, cattle feeding on alpine pastures, winter sports, hotels on the shores of lakes, tea-shops filled with tourists consuming creamy and very expensive cakes, and factories devoted to the boring of holes in Gruyère cheese. There is some truth in this picture (not about the cheese, of course, the correct name for which, in any case, is Emmental). The traditional, fairy-tale Switzerland does still exist, especially in the eastern part of the country, and winter sports and tourism both flourish, while Swiss hotels are so good that hoteliers from all over the world come to Switzerland to learn their trade. The country has long been, and is still, extremely popular with English tourists, probably because it manages to be foreign, and yet to be considerably cleaner and more orderly than some of its neighbours.

Nevertheless, in contrast to the impression which many tourists may receive, Switzerland is, in reality, a highly industrialised country. This is a remarkable achievement when it is remembered that it has effectively no natural resources except water power (uranium, needed for atomic energy, has just been discovered in the region known as the Valais, but it will be some years before this can be

exploited). The real natural resources of the country are the skill and intelligence of its people, with their long tradition of craftsmanship, and it is on these that the prosperity of Switzerland depends. The watch industry is, of course, the classic example of the application of Swiss skill to the development of a product which sells because of its sheer excellence, but the same principle applies to heavy engineering, in which there are many Swiss firms with names known throughout the world, and to the chemical industry. Some of the brightest chemical brains in the world are concentrated in Basle, the Swiss chemical centre. With a home market of only 5 million, Swiss industry has no need to be told to export, and about three-quarters of its output, in fact, goes abroad.

Even this industrial success story does not exhaust the interest of living in Switzerland. I mentioned the fact that living abroad makes you look at familiar problems from a new angle, and one problem that living in Switzerland, in particular, forces you to think about is that of trying to decide what it is that constitutes a nation, and especially how the peculiar mixture which is Switzerland manages to be one, and to have survived as one for so many centuries.

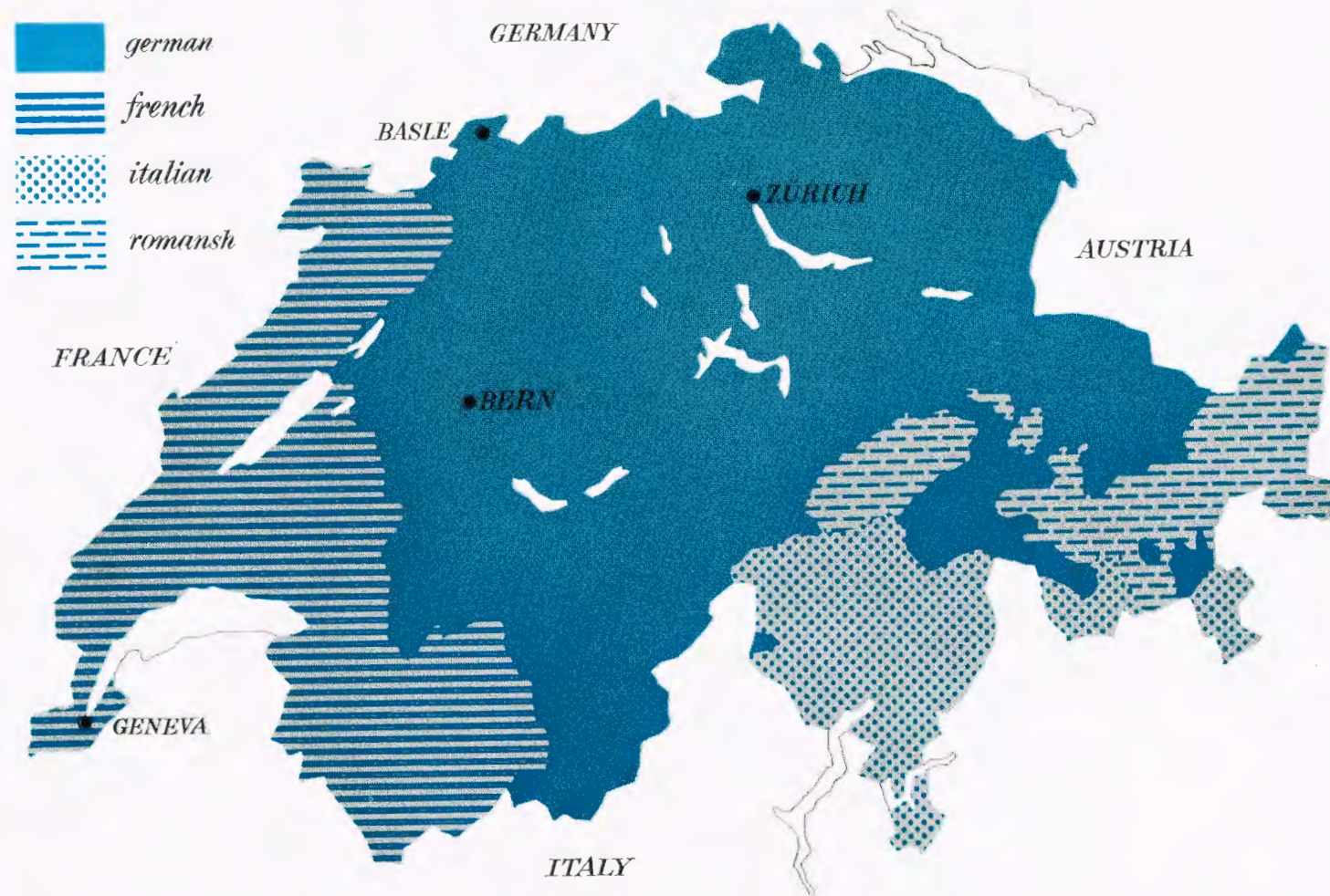
If you compare Switzerland with Britain, for example, the contrast between the two countries is quite striking. In Britain, although there are quite marked differences between the various parts of the country, and even certain differences in legal procedure, as between England and Scotland, for example, there is only one national language (Welsh and Gaelic being spoken by relatively small minorities) and the country is effectively a unit. Switzerland, on the other hand, is a federation which is made up of no less than 22 units known as cantons, and which in principle, at least, are still sovereign states. As recently as the middle of the nineteenth century, crossing the border between cantons involved much the same customs formalities as crossing the frontier between different countries does now. Then there are no less than three major national languages: French, German and Italian, and two major religions: Roman Catholic and Protestant. Not content with this, a fourth language, Romansh, which is spoken by only about 40,000 people, has also been given official status. Among the consequences of this



ABOVE: A watchmaker working on a complicated clock mechanism

BELOW: Inside a cheese factory





A map of Switzerland, showing the four different languages spoken

state of affairs, which seems so peculiar to British eyes, is that there is, for example, no such thing as a Swiss national newspaper nor a single Swiss radio or television programme for the whole country.

While I was aware before I came here that Switzerland was a federation made up of a number of individual cantons, one of the most striking things to me has been the discovery of the extent to which these cantons have retained their independence, over 100 years since the present federal system was set up, and the strength of the local feeling which exists. In my early days here I enquired in a bookshop for a book on the Swiss educational system. The answer was that no such system exists. Education is a cantonal prerogative and the system varies from canton to canton. Similarly, a reference to the Republic in a proclamation on the village notice-board refers to the Republic of Geneva and not to the Federal Republic. Quite a common sight on official notice-boards, again, is that of a list of citizens of other cantons of Switzerland who have

applied for naturalisation as citizens of Geneva. While the national holiday on 1st August, the anniversary of the signing in 1291 of the pact between the three original cantons of Uri, Schwytz and Unterwald, is observed in Geneva, the feeling is not the same as it is on 12th December, on the occasion known as the Escalade, which celebrates a kind of skirmish in which a band of Savoyards attempted to seize the city in 1602, but were repelled, partly thanks to the efforts of a lady of the name of la mère Royaume, who threw a cauldron full of rice soup at the head of one of the invaders.

Another feature of the Swiss way of life which seems strange to the foreigner is the dislike of political leaders or national figureheads. The election of the President of the Confederation is a simple formality in that the vice-president always succeeds the president, and his successor in turn is appointed by a kind of rota system. In the same way the Swiss army has no general, except in time of war. Then there is the technique of the national

referendum, by means of which Federal legislation can be challenged. As a citizen of the canton of Vaud is supposed to have said: The referendum gives us the right to say no when Berne (the Federal capital) has said yes. In some of the smaller cantons, in addition, democracy still has the same meaning as it had for the ancient Greeks, in that all decisions are taken by the vote of the whole male population above a certain age. This is the celebrated "Landsgemeinde," in which every spring all the men who are entitled to vote gather together in the open air, wearing their swords, and vote by show of hands.

All this adds up to a unique political system which has managed to survive for many centuries, during which time it has successfully passed through many crises. Perhaps the most severe of these was the period during the last war when Switzerland, an island of democracy and independence, was completely surrounded by a sea of Hitlerian dictatorship. That she survived is largely the result of the efforts and determination of one man, General

Guisan, who is one of Switzerland's heroes. General Guisan managed to convince the Germans that the Swiss will to resist was something to be taken seriously, and thus that the advantages to be gained from the conquest of Switzerland would not be worth the losses that this conquest would inevitably entail.

Another strand which runs through the whole of Swiss life is, of course, neutrality. Switzerland, it has been said, is the neutral to end all neutrals, so neutral that she does not belong to the United Nations, though she is a member, for example, of the World Health Organisation.

Swiss neutrality is perhaps now facing its greatest test, with the trend towards economic unification in Europe. As a small country, for which exports are absolutely vital, Switzerland cannot remain apart without risking economic disaster. (It is perhaps Swiss consciousness of the inherently fragile economic situation of the country which is behind the remarkable fact that not a single strike was recorded in Switzerland in 1961.) On the other hand economic unification could lead to political unification and to the end of Switzerland's neutral status. This is the dilemma facing the country at the present. It is to be hoped that there will be sufficient understanding of Switzerland's special position to enable economic union to be achieved without any demand being made for a major change in the traditional policy of neutrality. It is already being said in certain quarters that if such a demand is made Switzerland must be prepared to "go it alone," although the difficulties of doing so are obviously enormous.

Before coming to live in Switzerland the foreigner may be inclined to dismiss the Swiss suggestion that there might be something for the world to learn from Swiss experience. After having lived in the country, though, he may begin to feel that, in fact, not enough attention has been given to the minor miracle that is Switzerland. Finally, he is inevitably led to ask himself whether the minor miracle might not even show how the major miracle of a united Europe might be achieved. Perhaps the example of this small country in the heart of Europe may point the way to the solution of some of the most difficult problems of our time.

RIGHT: The Landsgemeinde in session at Glarus





"Montmartre." *Photograph by D. J. Leggott (Wilton Works)*